

## **REMARKS**

The Office Action dated August 1, 2007 has been received and carefully noted. The above amendments to the claims, and the following remarks, are submitted as a full and complete response thereto.

Claims 1, 6, 9, and 16 have been amended to more particularly point out and distinctly claim the subject matter of the invention. Claim 23 has been added. No new matter has been added. Claims 1-16, 18-20, and 22-23 are currently pending in the application and under consideration.

Claim 9 was rejected under 35 U.S.C. 112 on the grounds that the claim lacks antecedent basis for "routing step (s5)." Claim 9 has been amended to recite to "requesting of instructions" rather than "routing step (S5)." As such, it is respectfully requested that the rejection of claim 9 be withdrawn.

Claims 1-4, 6-9, 11-14, 16, 18, 19, and 22 were rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 6,636,501 to Dispensa et al. (Dispensa). This rejection is respectfully traversed.

Independent claim 1, upon which claims 2-5 and 11-15 are dependent, recites an apparatus that includes a storing unit configured to store a pre-defined list of rules for detecting special data packets. The apparatus also includes a detecting unit configured to detect special data packets in a received plurality of data packets based on the pre-defined list of rules stored in said storing unit. The apparatus further includes a routing unit configured to request instructions for the special data packets detected by said detecting unit

and route the special data packets in accordance with instructions received on request. The apparatus additionally includes an internal entity configured to store instructions for the special data packets. The routing unit is configured to notify said internal entity of the detected special data packets and request instructions for the special data packets from said internal entity. An external entity is configured to determine and update the instructions stored in said internal entity during active operations.

Independent claim 6, upon which claims 7-15 are dependent, recites a method that includes storing a pre-defined list of rules for detecting special data packets. The method also includes detecting special data packets in a received plurality of data packets based on the stored pre-defined list of rules. The method further includes requesting instructions for the detected special data packets and routing the special data packets in a data network in accordance with instructions received on request. The method additionally includes notifying an internal entity of the detected special data packets and requesting instructions for the special data packets from said internal entity when requesting the instructions for the detected special data packets. The instructions stored in said internal entity are determined and updated by an external entity during active operations.

Independent claim 16 recites an apparatus that includes storing means for storing a pre-defined list of rules for detecting special data packets. The apparatus also includes detecting means for detecting special data packets in a received plurality of data packets based on the pre-defined list of rules stored in said storing means. The apparatus further includes routing means for requesting instructions for the special data packets detected by

said detecting means and route the special data packets in accordance with instructions received on request. The apparatus additionally includes an internal entity means for storing instructions for the special data packets. The routing means comprises notifying means for notifying said internal entity of the detected special data packets and request instructions for the special data packets from said internal entity. An external entity comprises means for determining and means for updating the instructions stored in said internal entity during active operations.

Independent claim 18 recites a network element that includes a routing unit configured to request instructions for special data packets detected by a detecting unit and route the special data packets in accordance with instructions received on request. The routing unit is configured to notify an internal entity of the detected special data packets and request instructions for the special data packets from said internal entity. The routing unit is further configured to notify an external entity of the detected special data packets instead of said internal entity, and request instructions for the special data packets from said external entity instead of said internal entity.

Independent claim 22 recites a computer program implemented on a computer-readable medium, said computer program controlling a processor to store a pre-defined list of rules for detecting special data packets. The computer program also controls a processor to detect a special data packets in a received plurality of data packets based on one of the stored pre-defined list of rules. The computer program further controls a processor to request instructions for the detected special data packets. The computer

program additionally controls a processor to route the special data packets in a data network in accordance with instructions received upon the request. The computer program further controls a processor to notify an internal entity of the detected special data packets. The computer program also controls a processor to request instructions for the special data packets from the internal entity when requesting the instructions for the detected special data packets. The instructions stored in the internal entity are determined and updated by an external entity during active operations.

Independent claim 23 recites a network element that includes routing means for requesting instructions for special data packets detected by a detecting unit and route the special data packets in accordance with instructions received on request. The routing means comprises notifying means for notifying an internal entity of the detected special data packets and request instructions for the special data packets from said internal entity. The routing means further comprises notifying means for notifying an external entity of the detected special data packets instead of said internal entity, and request instructions for the special data packets from said external entity instead of said internal entity.

As will be discussed below, Dispensa fails to disclose or suggest all of the elements of any of the presently pending claims.

Dispensa generally describes a communication system speeding up digital traffic between nodes. The traffic is organized into data frames flowing over network high and low speed links attached to entry and exit ports of the nodes. Low speed modules connect the low speed links to a high speed switch. Router dispatch modules connect the

high speed switch to a node attached to a high speed link for forwarding each data frame toward a dynamically selected target low speed module via the high speed switch, such that the dynamic selection of the target low speed module is based on detection of the module with the least load. At least one main router is attached to the high speed switch for storing a routing table to enable the targeted low speed module to orient one of the frames toward a right node exit port. See abstract of Dispensa.

Dispensa generally describes that each of the low speed modules is provided with a "cache" memory duplicating the main router routing table entries already used for previous received frames oriented toward the considered Low Speed module. Then, assuming the currently processed frame header addresses an entry already in the "cache" (in function of the frame destination address), then the current frame orientation toward the right node exit port runs faster since the "cache" is a sub-assembly of the main routing table. See column 6, lines 44-56, of Dispensa.

It is respectfully submitted that Dispensa fails to teach or suggest, at least, "a storing unit configured to store a pre-defined list of rules for detecting special data packets," as recited in independent claims 1, 6, 16, and 22.

On page 3, the Office Action took the position that column 8, lines 33-43, and Fig. 6 of Dispensa disclose a storing unit for storing a pre-defined list of rules for detecting special data packets. However, column 8, lines 33-43, of Dispensa merely discloses determining the conditions in which the local low speed module routing table cache is looked-up for an entry. See column 8, lines 36-43, of Dispensa. Dispensa does not disclose or suggest

storing a pre-defined list of **rules for detecting special data packets** as recited in the presently pending claims. (Emphasis Added). There is no teaching or suggestion in Dispensa that a pre-defined list of rules is stored. Accordingly, Dispensa fails to teach or suggest, at least, “a storing unit for storing a pre-defined list of rules for detecting special data packets,” as recited in independent claims 1, 6, 16, 18, 22, and 23.

It is respectfully submitted that Dispensa also fails to teach or suggest, at least, “a detecting unit configured to detect special data packets in a received plurality of data packets based on the pre-defined list of rules stored in said storing unit,” as recited in independent claims 1, 6, 16, 18, 22, and 23.

The Office Action took the position that column 8, lines 33-43 and Fig. 6 of Dispensa disclose this step. However, Dispensa’s detecting step 61 does not disclose or suggest **detecting** special data packets in a received plurality of data packets **based on the pre-defined list of rules** stored in said storing unit. (Emphasis Added). As discussed above, Dispensa’s system does not store a pre-defined list of rules. As such, Dispensa fails to disclose such detecting step based on the pre-defined list of rules stored in the storing unit.

Therefore, Dispensa fails to disclose or suggest, at least, “a detecting unit configured to detect special data packets in a received plurality of data packets based on the pre-defined list of rules stored in said storing unit,” as recited in independent claims 1, 6, 16, 18, 22, and 23.

Furthermore, it is respectfully submitted that Dispensa fails to teach or suggest, at least, “an internal entity configured to store instructions for the special data packets, wherein said routing unit is configured to notify said internal entity of the detected special data packets and request instructions for the special data packets from said internal entity, and wherein an external entity is configured to determine and update the instructions stored in said internal entity during active operations,” as recited in independent claims 1, 6, 16, 18, 22, and 23.

On pages 3-4, the Office Action took the position that a cache memory of Dispensa is an internal entity and a main router module 22 of Dispensa is an external entity. In Dispensa, a main router is contacted when a cache has no matching entry. However, in claim 1, an external entity is contacted when a packet is recognized based on the pre-defined rules. When a packet is not recognized, nothing happens. Thus, a cache memory and a main router module 22 of Dispensa do not correspond to an internal entity and external entity, respectively.

According to the presently pending claims, determination and updating of instructions in the internal entity by the external entity is performed not only in case the internal entity does not contain information on handling a data packet as in Dispensa. In addition, an **entry of a routing table** of Dispensa does not correspond to the **instructions** as recited in the presently pending claims because in Dispensa, packets are routed based on the routing table, while packets are handled within a router (e.g. modify the packet before

routing it out, See page 9, lines 27-30, of the present application) based on instructions. See at least page 3, lines 20-25 of Dispensa. (Emphasis Added).

In view of the foregoing, Dispensa does not teach or suggest, at least, “an internal entity configured to store instructions for the special data packets, wherein said routing unit is configured to notify said internal entity of the detected special data packets and request instructions for the special data packets from said internal entity, and wherein an external entity is configured to determine and update the instructions stored in said internal entity during active operations,” as recited in independent claims 1, 6, 16, 18, 22, and 23.

Claims 5, 10, 15, and 20 were rejected under 35 U.S.C. 103(a) as being unpatentable over Dispensa, in view of U.S. Patent No. 5,751,799 to Mori (Mori). The Office Action took the position that Dispensa discloses some features of claims 5, 10, 15, and 20. The Office Action then cited Mori to cure the deficiencies of Dispensa. This rejection is respectfully traversed.

Mori generally describes a method and device for performing a charging operation during data communication in a data switching network such as a public packet exchange, a public frame relay switching network, or an ATM switching network. A charge rate is graduated in accordance with a data transmission delay time or an equipment use when an alternate route is formed because of a certain state or an equipment failure in a network. See abstract of Mori.

There is no teaching or suggestion in Mori that an internal entity configured to store instructions for the special data packets, wherein said routing unit is configured to notify



said internal entity of the detected special data packets and request instructions for the special data packets from said internal entity, and wherein an external entity is configured to determine and update the instructions stored in said internal entity during active operations as recited in the presently pending claims. As discussed above, Dispensa also fails to teach or suggest such internal entity.

Therefore, the combination of Dispensa and Mori fails to teach or suggest all of the elements of claims 1, 6, 16, 18, 22, and 23.

Furthermore, the combination of Dispensa and Mori fails to disclose or suggest routing unit for communication with an external charging entity for charging the routing of the special data packets as recited in claim 5. As discussed above, in Dispensa, external entity does not have access to internal storage. As such, it is respectfully requested that the rejection of claim 5 be withdrawn.

Claims 2-5 and 11-15 are dependent upon claim 1. Claims 7-10 and 19-20 are dependent upon claims 6 and 18, respectively. Accordingly, claims 2-5, 7-10, 11-15, and 19-20 should be allowed for at least their dependencies upon claims 1, 6, and 18, and for the specific limitations recited therein.

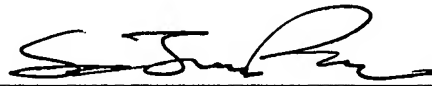
In view of the above, it is respectfully submitted that the claimed invention recites the subject matter which is neither disclosed or suggested in the cited prior art. Also, it is respectfully submitted that the subject matter is more than sufficient to render the claimed invention unobvious to a person of ordinary skill in the art. Applicants therefore

respectfully request that each of claims 1-16, 18-20, and 22-23 be found allowable and this application be passed to issue.

If for any reason the Examiner determines that the application is not now in condition for allowance, it is respectfully requested that the Examiner contact, by telephone, the applicants' undersigned attorney at the indicated telephone number to arrange for an interview to expedite the disposition of this application.

In the event this paper is not being timely filed, the applicants respectfully petition for an appropriate extension of time. Any fees for such an extension together with any additional fees may be charged to Counsel's Deposit Account 50-2222.

Respectfully submitted,



Sejoon Ahn  
Registration No. 58,959

**Customer No. 32294**  
SQUIRE, SANDERS & DEMPSEY LLP  
14<sup>TH</sup> Floor  
8000 Towers Crescent Drive  
Tysons Corner, Virginia 22182-2700  
Telephone: 703-720-7800  
Fax: 703-720-7802

SA:dc

Enclosures: Additional Claim Fee Transmittal  
Check No. 17419